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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,178	06/24/2003	Tyler J. Beck	23,392-77	9455

23452 7590 06/16/2005

PATENT DEPARTMENT  
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EXAMINER

EVANS, FANNIE L

ART UNIT PAPER NUMBER

2877

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/602,178

Applicant(s)

BECK ET AL.

Examiner

F. L. Evans

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on November 3, 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-62 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-10, 12-19, 21 and 23-62 is/are allowed.
- 6) ☒ Claim(s) 11, 20 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 0404.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *The Drawings*

New formal drawings in compliance with 37 CFR § 1.121(d) are required in this application because the present drawings are informal and do not comply with 37 CFR § 1.84. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The formal drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11, 20 and 22 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The lack of an antecedent for "the first beam of excitation energy" in line 2 of claim 11, "the aerosol" in lines 2 and 3 of claim 20 and "the particle sizing component" in line 2 of claim 22 renders these claims and any claim dependent therefrom indefinite. Correction is required.

### *The Information Disclosure Statements*

The prior art cited in the information disclosure statements filed on April 6 and 7, 2004 has been considered.

### *Additional Prior Art*

Hairston et al (US 5,999,250) disclose (1) the use of two spaced apart laser beams to determine the size of particles moving through the path of each of the beams and (2) controlling the pulsing time of a UV laser in response to the detection of light scattered from the particles irradiated by the spaced apart

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laser beams.

Chang et al (6,532,067 B1) disclose, in an aerosol fluorescence spectrum analyzer, the use of first and second trigger lasers emitting different wavelengths of light to trigger a pulsed probe laser located down stream from the trigger lasers.

*Allowable Subject Matter*

Claims 1-10, 12-19, 21 and 23- 62 are allowed over the prior art of record.

Claims 11, 20 and 22 would be allowable if rewritten or amended to overcome the rejection under 35 U.S.C. § 112, 2nd paragraph, set forth in this Office action.

The prior art of record, taken alone or in combination, fails to disclose or render obvious a process and a system for analyzing particles in which the emission from the particles is used to select for further analysis only the particles with emissive response profiles that coincide with a predetermined reference profile, as set forth in independent claims 1 and 15.

The prior art of record, taken alone or in combination, fails to disclose or render obvious a process and apparatus for characterizing particles with controlled coherent energy sources in which radiant energy emanating from particles irradiated by a first adjustable coherent energy beam is used to switch the first adjustable coherent energy beam from a first state to a second state, as set forth in independent claims 28 and 42.

The prior art of record, taken alone or in combination, fails to disclose or render obvious a particle detection apparatus comprising first and second coherent energy sources emitting first and second wavelengths, respectively, and a detector disposed to detect energy at the first wavelength scattered by a particle and to detect energy emitted by the particle at a third wavelength after being irradiated by the second coherent energy source, as set forth in independent claim 54.

The prior art of record, taken alone or in combination, fails to disclose or render obvious the use of a process for dynamically controlling a second sensor output of an aerosol characterizing

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system, as set forth in independent claim 61.

The prior art of record, taken alone or in combination, fails to disclose or render obvious the use of a process for dynamically controlling a second sensor output of an aerosol characterizing system, as set forth in independent claim 61.


As to claim 62, the prior art of record, taken alone or in combination, fails to disclose or render obvious a particle sizing system comprising the claimed timing component, in combination with the rest of the limitations of the claim.

*Fax/Telephone Numbers*

Papers related to this application may be submitted to Technology Center 2800 by facsimile transmission. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The fax number for Technology Center 2800 is (703) 872-9306 for regular and After Final communications.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to the examiner whose telephone number is (571) 272-2414. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr., can be reached on (571) 272-2800 ext 77.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**F. L. EVANS**  
**PRIMARY EXAMINER**  
**ART UNIT 2877**